Fully Leveraging HIE
Maryland Health Disparities and Public Health

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Martin's West

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Topics

- What is Health Information Exchange?
- Why it is important
- What it looks like
- How it changes your work
- National trends
- Opportunities for physicians
- Possible Health Disparities and HIE Strategies

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Focus on the Point of Care
Physician-Patient Relationship

Assumptions for Today

- **Health Information Technology (HIT)**
  - The use of electronic information tools such as electronic charts, electronic prescribing, electronic ordering, clinical messaging, decision support, comparative analysis, etc. to improve quality and effectiveness of care.
- **Health Information Exchange (HIE)**
  - Two or more organizations that exchange data within and across naturally occurring medical referral regions.
- HIE and RHIO are interchangeable
- We are speaking mostly from the provider/patient viewpoint today

A Healthcare Vision:

Eliminate Health Disparities In Maryland

- Goal
  - Patients have access to affordable, cost-effective, quality care at the *"Point of Care"*

- Healthcare IT contributes to this goal by:
  - Cost effectively providing clinicians and patients with access to relevant patient information (regardless of where the patient has been seen and where the physician is located)
  - Enabling the physician-patient relationship to thrive

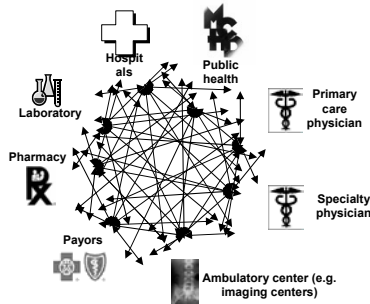# The Reality Today

- THE HIT and HIE PROBLEM
  - Physicians drowning in paper
  - Physicians/hospitals in information silos
  - If data exchange exists, too many expensive interfaces
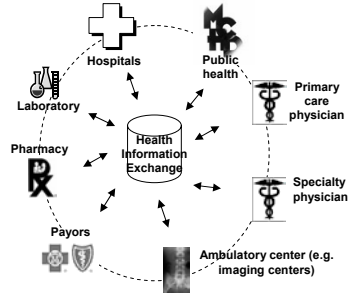- THE RESULT
  - Clinical decisions made without all the information – duplicate testing, errors, safety problems, inefficient care

HIE Opportunity:
Reduce Integration costs

Point to Point Interfaces

Hospitals
Public health
Laboratory
Primary care physician
Pharmacy
Specialty physician
Payors
Ambulatory center (e.g. imaging centers)

Health Information Exchange Model

Hospitals
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Prepared by Indiana Health Information Exchange

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Electronic Info Physicians Ask For

- Delivery of lab and radiology results
- Delivery of hospital reports
- Referrals between physicians
- Inquiry into patient info from other orgs
  - Medications, allergies, problem lists
  - Diagnoses, test results
  - ER docs, others
- Electronic prescribing, esp. prescription refills
- Registries – immunization, cancer, asthma, etc.
- Automatic data feeds into their EMRs
- Public health reportable conditions

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Patient Data at the Point of Care
Where is the data coming from?

Labs

Hospitals

Public Health

Radiology Centers

Other Physicians

Clinics

Other Providers

Pharmacy
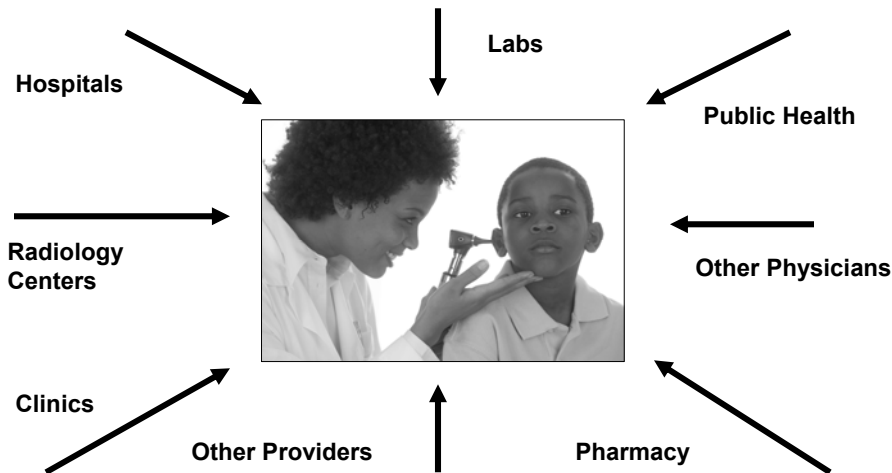
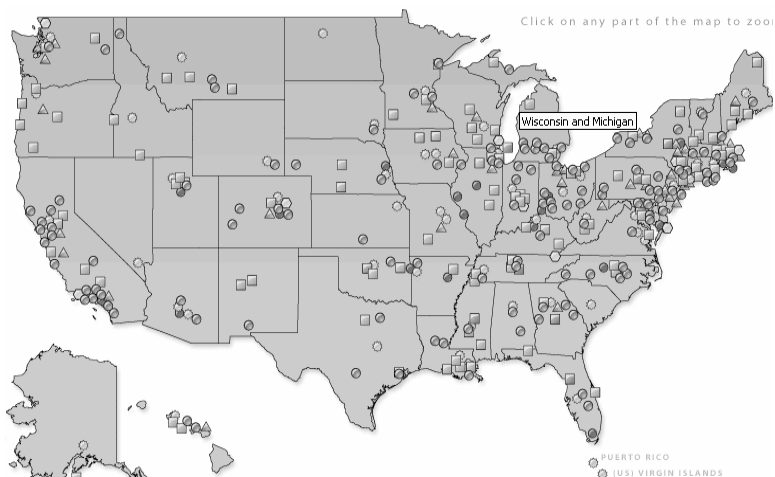# Can Healthcare Technology Improve Care?

- Physician access to patient-centric electronic information results in:
  - Improved diagnosis and treatment
  - Much more e-documentation/Fewer errors
  - Easier communication between patient and clinician
  - Improved coordination with other stakeholders
  - Reduced cost of care, enhance continuity of care
  - Maximizes benefits of other electronic applications – electronic prescribing, electronic ordering
  - Eliminate clinical decisions made without all the information – duplicate testing, errors, safety problems, inefficient care etc.
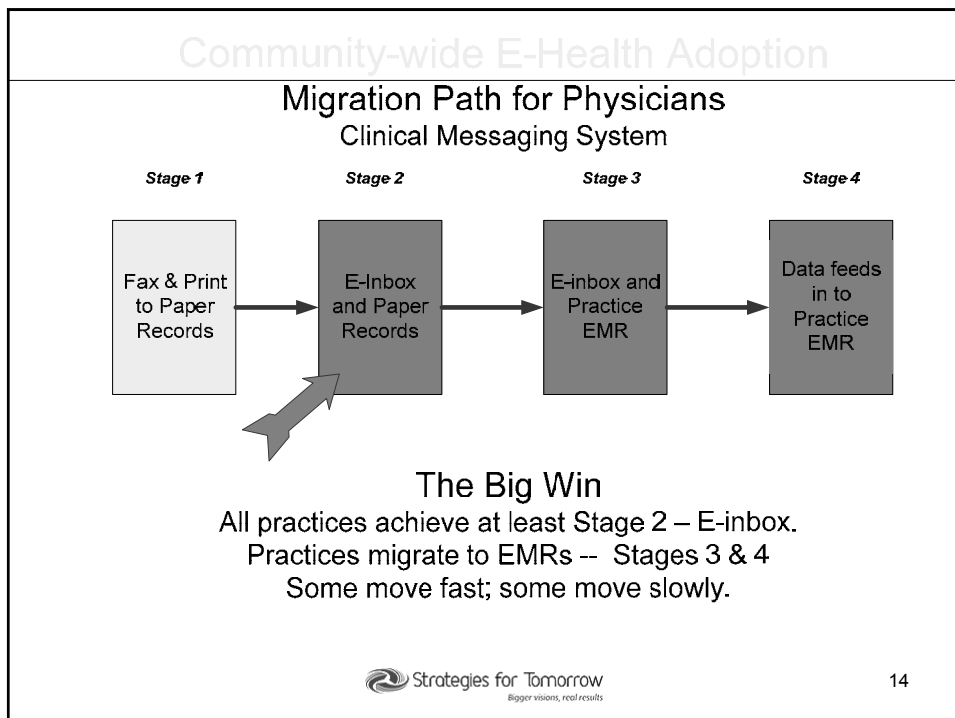
Low Participation in Clinical Trials Contributes to Health Disparities?

- Clinical trials are crucial for the development of effective prevention, diagnostic and treatment methods for cancer and other diseases.
- While participation in cancer clinical trials is generally low overall *(around three percent for adults),* minorities and underserved communities, especially African Americans and those living in rural areas, are particularly under-represented.

National Cancer Institute – Benchmarks – September 2006

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Growth in HIE Projects -- 2006

Click on any part of the map to zoo

Wisconsin and Michigan

PUERTO RICO

(US) VIRGIN ISLANDS

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Sample Community-wide HIE
Logic Model – Provider Orientation

DATA SENDERS

Hospitals Labs Radiology Other Senders
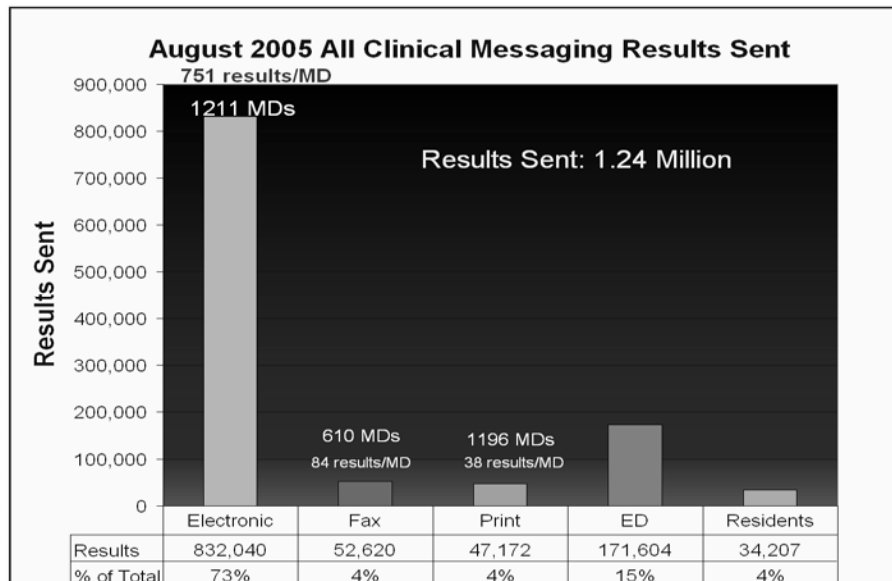
POSSIBLE PHASES OF AN HIE

Phase 1 — Data senders deliver electronic results and reports to practices to achieve critical mass

Phase 2 — Increase electronic two-way transactions; add participating orgs; involve public health, researchers, patient communication

Phase 3 — Make community-wide data available to authorized users on inquiry; start with ED

Phase 4 — Exchange data across HIEs; involve other healthcare stakeholders

Community HIE

OTHER DATA EXCHANGE

-- Public Health

-- Research

-- Consumer Portal

-- Others

Fax or Printer Practice Electronic Inboxes Practice EMRs Other Data Receivers

Paper Records Paper Records **DATA RECEIVERS**

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Community-wide E-Health Adoption

Migration Path for Physicians
Clinical Messaging System

Stage 1 *Stage 2* *Stage 3* *Stage 4*

Fax & Print to Paper Records E-Inbox and Paper Records E-inbox and Practice EMR Data feeds in to Practice EMR

The Big Win
All practices achieve at least Stage 2 – E-inbox.
Practices migrate to EMRs -- Stages 3 & 4
Some move fast; some move slowly.

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Possible HIE Roadmap

Phase 1	Clinical Messaging data exchange	Data senders deliver results to physician e-inbox or EMR; cross referrals
Phase 2	Expanded data exchange	More participants & transactions; add public health, consumer communication, research
Phase 3	Community-wide inquiry	Access to data from multiple providers by authorized users – attending physicians, ED; can do disease mgmnt
Phase 4	Data across HIEs	Exchange data with neighboring HIEs – ED; transient patients

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Health Bridge Physician Volume

August 2005 All Clinical Messaging Results Sent

Results Sent: 1.24 Million

	Electronic	Fax	Print	ED	Residents
Results	832,040	52,620	47,172	171,604	34,207
% of Total	73%	4%	4%	15%	4%

- 751 results/MD, 1211 MDs (Electronic)
- 84 results/MD, 610 MDs (Fax)
- 38 results/MD, 1196 MDs (Print)

Physicians are Key to Disparities:
Help Them Become Electronic

- Solo practitioners and small physicians groups represent well over 75% of all practicing physicians
- Offer no or low-cost solutions to help small practices become electronic *(e.g. community-wide clinical messaging to send data to physician e-inbox or EMR)*
- Focus on easy to use, high value applications *(e.g. results delivery, cross-referrals, electronic refills)*
- Provide help with workflow to achieve cost savings
- Help physicians generate revenue through clinical trials
- Physician leadership mobilize *entire* physician community, not just a few techies
- Work jointly with practice administrators
- Get many practices on board fast to leverage benefits

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Physician Tools to Address Disparities:
Imbed Key Tools in E-inbox or EMR

- Get all data senders to feed data to physician e-inbox or EMR via clinical messaging system *(hospitals, labs, radiology, etc.)*
- Integrate evidence-based standards of care into EMR templates -- protocols, alerts, reminders
- Public health send relevant alerts and reminders to physician EMR or e-inbox
- Public health link electronic registries to EMRor e-inbox *(e.g., immunizations)*
- Pilot a specific chronic disease (diabetes, stroke) using physician/patient centric electronic tools and access to information to reduce burden of disease. (*Show how technology "moves the mark")*

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Reduce Access Barriers: Fiscal, Physical, Cultural, Linguistic, Transportation

- Establish HIEs in areas with greatest disparities
- Hospitals share data with ERs/community centers
- Provide no or low cost solutions to help all physicians use simple e-tools *(e.g. clinical messaging to get to critical mass fast)*
- Treat patients remotely with secure e-mail, telemedicine, or medical devices *(e.g. disabled, home care, rural locations)*
- Imbed cultural and linguistic competency into the electronic systems *(international banking does it)*
- Feed electronic data directly into Practice EMRs

Improve Data Analysis Around Disparities: Data By Racial and Ethnic Minority

- Expand clinical trials by patient and front-line provider
- Set up data feed from HIE to Public Health to collect *all* relevant de-identified data for analysis
- Collect key demographic info at least once
- Use record locater to match patient information *(helps match patient irrespective of location/name changes)*
- Move all data systems toward emerging national standards for seamless data exchange *(National Health Information Network, Public Health Information Network, etc.)*

Local Public Health Departments: Participate in HIEs

- Realize that HIEs want public health at the table!
- Encourage HIEs to implement PH priorities
- Participate in clinical messaging just like practices
- Add electronic links to physician e-inbox for reportable diseases and alerts
- Use e-data to speed up collection and analysis of data for surveillance *(e.g. early warning of infectious disease)*
- Think local-statewide simultaneously *(Data flows in all directions – community HIE, local health department, state health department)*

Link Disparities and HIE Strategies: State-wide Collaborations

- Engage PH and disparities stakeholders in community and state HIE planning.
- Establish HIEs in all communities with greatest health disparities.
- Establish HIEs among safety net providers
- Leverage public health's role as neutral facilitator of multi-stakeholder HIEs

Leverage New Opportunities for Funding

- Alert: This topic has high interest!
- Energize stakeholders with vision and strategy based on MD 2006 Disparities Plan
- Leverage more funding sources *(e.g., health disparities **and** HIE funders)*
- Build the business case for each stakeholder
- Target funders to specific parts of plan that fit their missions

Maryland Disparities & HIE Proposal

- Establish and convene a Disparities and Healthcare Information Exchange Task Force in collaboration with the Office of Minority Health.
  - Support the Coalition for Disparities and HIE (DAHIE)
  - Focus on communities with high disparities
  - Develop strategies based on the Office of Minority Health Plan *(e.g. minority clinical trials, participation in HIEs, no or low cost electronic solutions for physicians)*
  - Educate key stakeholders across the state
  - Establish a web-site on Disparities and HIE to feed the discussions
  - Build the business case for stakeholders
  - Obtain multi-source funding for initiatives